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# WATER SUPPLY OUTLOOK FOR MONTANA

Prepared by

# U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

MONTANA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with Federal, State, and private organizations listed on the inside back cover of this report.



#### TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbis Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters of key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

#### PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

#### PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

# WATER SUPPLY OUTLOOK FOR MONTANA

and FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

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# MONTANA WATER SUPPLY OUTLOOK April 1, 1971

### COLUMBIA RIVER BASIN

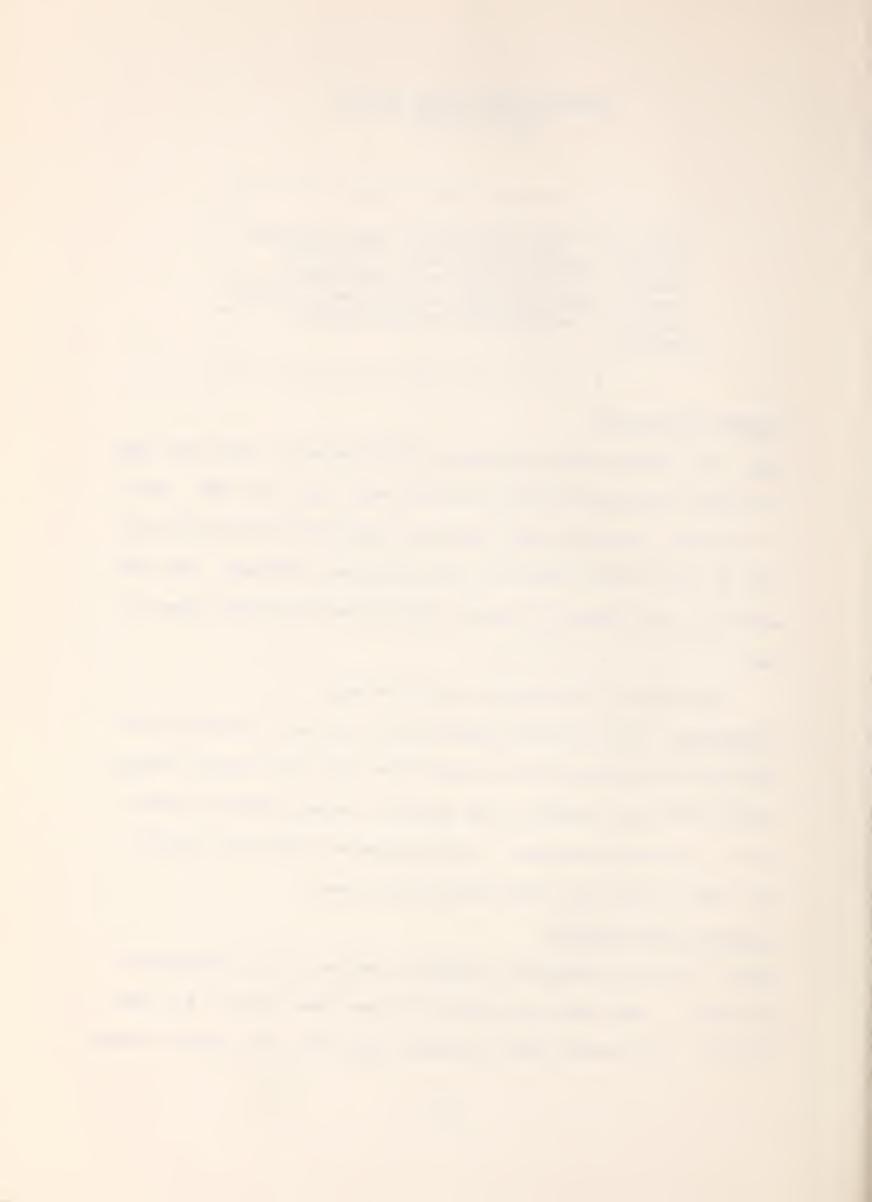
Snow - All Columbia River drainages in Montana have a snow pack about 125 percent average and 20 to 50 percent more than last year. Some of the higher elevation snow courses are maximum of record for this date in the Flathead, Clark Fork and Bitterroot drainages. Many are second to fifth highest of record. Snow is dense for this time of year.

Soil moisture is average to above average.

Streamflow - The Bitterroot headwaters are forecast to produce about 135 percent average and the Kootenai River about 110 percent average. Runoff from other streams in the Columbia drainage should be about 120 to 125 percent average. In all drainages, this year's spring and summer runoff will exceed that of last year.

## MISSOURI RIVER DRAINAGE

Snow - The heavy snow pack continues to persist in all southwestern drainages. Large water equivalent increases were noted at all snow courses. All Missouri River drainages have 135 to 145 percent average



snow pack. Many snow courses in the Jefferson, Madison, Gallatin and Marias River headwaters and the mountains of central Montana have the largest water equivalent recorded for this time of year.

Many snow courses are fourth to second highest of record. With the exception of the Judith-Musselshell area, all drainages have a larger snow pack than a year ago.

Soil moisture is average to above average with some areas being near field capacity.

Streamflow - Streams in southwestern Montana are forecast to produce more runoff during the spring and summer months than was recorded last year. Some forecasts are higher than previous maximums observed during the last 35 years. Large volumes can be expected from streams in central Montana. Elsewhere, above average runoff is expected.

### YELLOWSTONE RIVER DRAINAGE

Snow - Some snow courses have more than the previously recorded maximum water contents. Most of the remaining courses are second or third highest of record. The Yellowstone drainage above the Bighorn River has a snow pack that is about 20 percent more than a year ago and 146 percent average. Snow cover in the Bighorn drainage in Wyoming is comparable. The Little Bighorn has less snow than a year ago, but is 136 percent average.

Soil moisture is near to above average.

<u>Streamflow</u> - Runoff is forecast to be 35 to 60 percent above average on streams in the Yellowstone drainage. In all areas, flows should exceed those of last year. Predicted volumes are generally near or above the highest observed during the last 40 years.



# SUMMARY OF SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses	THIS YEAR'S SNOW WA	ATER AS PERCENT OF:
	Averaged	Last Year	Average
COLUMBIA RIVER DRAINAGE			
Kootenai	18	152	123
Flathead	28	124	128
Upper Clark Fork	26	122	125
Lower Clark Fork	10	134	126
Bitterroot	13	126	123
MISSOURI RIVER DRAINAGE			
Jefferson	34	131	147
Madison	18	127	143
Gallatin	13	106	146
Missouri Main Stem	11	112	138
Judith-Musselshell	8	91	136
Marias-Teton-Sun	11	143	148
Milk (Headwaters)	3	144	140
YELLOWSTONE RIVER DRAINAGE			
Yellowstone	25	117	146
Little Bighorn	7	86	136



DRAINAGE BASIN and/or STATION

Name	Name Elevation Depth Capacity		Capacity	Date of Survey	This	Last	,
· · · · · · ·	Lievation	Depui	Capacity		Year	Year	Average +
	COLUMBI	A RIVER	BASIN				
**							
Kootenai	2022	4.0					
Baree Trail	3800	48	7.5	•	6.8		6.5
Murphy Lake R. S.	3000	48	22.6	3/30	20.2	21.1	21.1
Raven R. S.	3050	48	23.0	4/01	16.8	21.5	21.0
Flathead		- 0					
Desert Mountain	5600	54	8.4	•	8.2		7.6
Marias Pass	5250	54	6.5	3/28	6.2	4.8	5.5
Clark Fork							
Black Pine	7100	48	10.0	·	7.8	7.3	7.4
Lubrecht Forest	4100	48	26.8	4/02	18.1	-	22.0
Seeley Lake R. S.	4030	48	11.9	•	11.2	8.2	9.9
Skalkaho Summit	7260	48	10.8	4/01	10.0	9.5	9.7
Bitterroot							
Gibbons Pass	7100	48	7.1	3/31	6.2	3.7	5.3
Lolo Pass	5250	48	10.6	3/30	6.5	5.0	6.3
	MISSOUR	I RIVER	BASIN				
Beaverhead							
Lakeview	6700	48	15.3	4/01	6.8	5.8	7.7
Madison							
West Yellowstone	6700	48	6.5	3/28	2.9	1.5	2.7
<u>Gallatin</u>							
Bridger Bowl	7250	48	17.0		16.3	16.6	16.3
College Site No. 2	4856	54	17.7		17.8		16.4
Lick Creek	6860	48	18.8		17.4	17.3	17.2
Twenty-One Mile	7150	48	10.0	3/28	5.8	1.9	3.7
Missouri Main Stem							
Kings Hill	7420	48	11.8	4/01	4.8	6.3	6.8
Stemple Pass	6350	48	5.9	3/31	4.0	3.6	4.4
Milk							
Beaver Creek	3950	48	10.9		18.4	18.1	<b>60</b>
Rocky Boy	4700	36	10.1	3/31	7.5	7.3	-
<u>Yellowstone</u>							
Battle Ridge	6020	48	17.6	·	15.2	13.5	14.0
Northeast Entrance	7350	48	9.4	4/03	5.3	5.0	6.2

Profile (Inches)

Soil Moisture (Inches)

<sup>-4-</sup>

<sup>+</sup> Average for period of record.



# RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH

ſ			Usable	Usable Storage			
	Basin or Stream	RESERVOIR	Capacity	This Year	Last Year	Average	
-							
C	OLUMBIA RIVER BASII	N					
_		_					
F	1athead	Hungry Horse	3,428.0	1,980.0	•	•	
		Flathead Lake	1,791.0	732.5	726.5	746.7	
		Camas (4)	45.2	23.8	19.9	30.1	
		Mission Valley (8)	100.3	44.8	27.7	35.4	
С	lark Fork	Georgetown Lake	31.0	24.9	24.8	22.1	
		Noxon Rapids	334.6	205.6	183.5	188.0	
		Nevada Creek	12.6	9.0	6.4	6.6	
В	itterroot	Como	34.9	14.4	13.0	13.4	
		Painted Rocks	31.7	23.8	18.2	19.7	
M	ISSOURI RIVER BASIN	V					
_		-					
В	eaverhead	Clark Canyon	328.9	137.3		135.6	
		Lima	84.0	45 <i>.</i> 7	47.3	24.2	
	uby	Ruby	38.8	31.5	36.9	29.9	
Ma	adison	Hebgen Lake	377.5	282.0	266.3	176.7	
		Ennis Lake	41.0	36.0	36.7	35.5	
G	allatin	Middle Creek	8.0	4.8	4.4	3.9	
M:	issouri	Canyon Ferry	2,043.0	1,444.0	1,558.0	1,546.0	
		Hauser & Helena	61.9	61.3	73.1	50.5	
		Lake Helena	10.4	10,2	10.7	7.3	
		Holter Lake	81.9	80.7	78.0	54.7	
		Smith River	10.7		5.5	7.0	
		Durand	7.0		4.0	5.0	
		Martinsdale	23.1		5.2	8.0	
		Deadman's Basin	72.2		33.8	48.7	
		Fort Peck	19,410.0	16,580.0	16,200.0	11,050.0	
St	ın	Gibson	105.0		17.7		
		Willow Creek	32.3	23.6	20.6		
		Pishkun	32.0		17.4		
Ma	arias	Lower Two Medicine	16.6		-	0.0	
		Four Horns	19.2	13.6	-	12.2	
		Swift	30.0	18.1		21.5	
		Lake Frances	112.0		83.3		
		Tiber	1,347.0				
M:	i1k	Fresno	127.2		75.1		
		Nelson	66.8		44.4		
		Lake Sherburne	66.1		19.6		
Y	ellowstone	Mystic Lake	20.8			5.0	
		Tongue River	68.0	3 4 3	39.1		
		Cooney	27.5	21.0	16.4		
В	ighorn		1,356.0				
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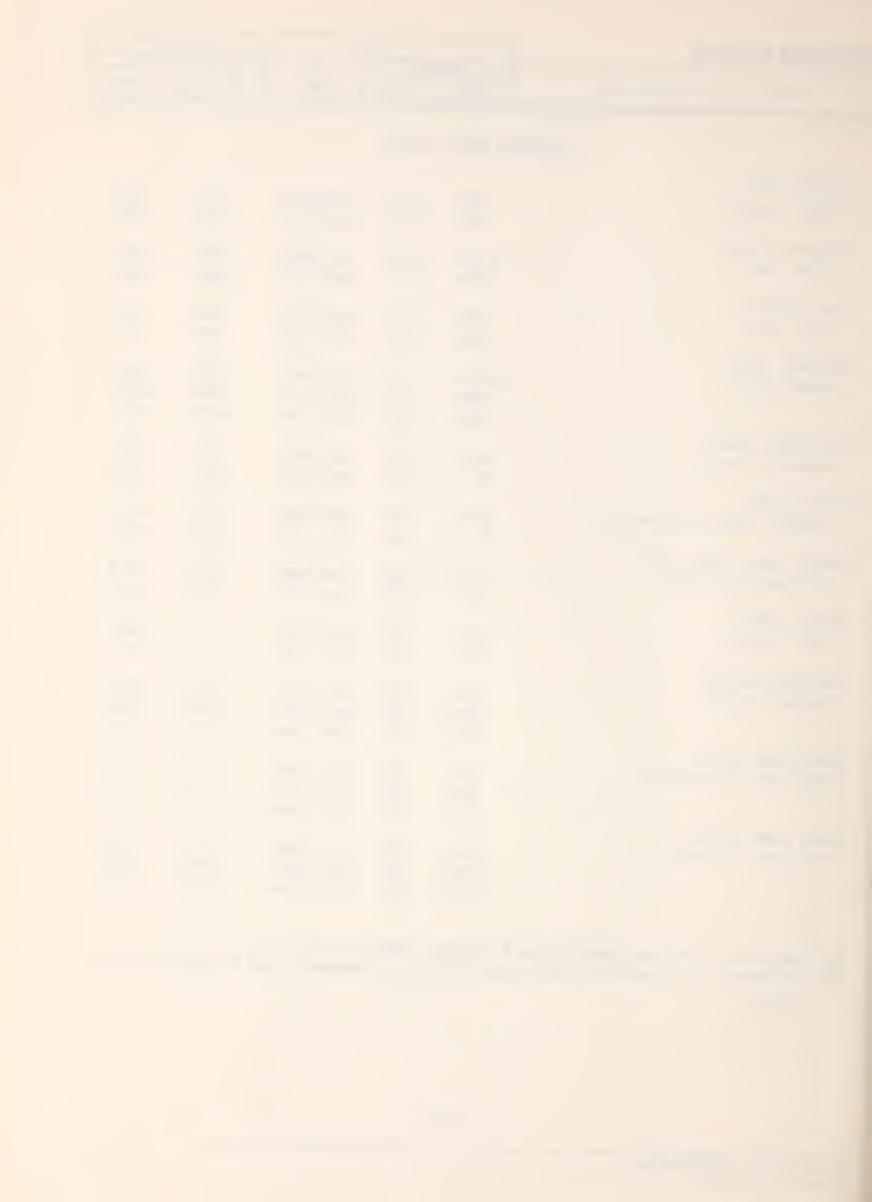


STREAMFLOW FORECASTS		THIS YEAR	PAST RECORD		
	FORE	CAST	FORECAST	THOUSAND ACRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average

	COLUMBIA RIVER	BASIN			
FISHER RIVER					
Libby (near)	350	117	Apr-Sept	232	298
	335	119	Apr-July	218	281
KOOTENAI RIVER					
Libby (at)	8750	109	Apr-Sept	5362	8025
NAAR DINED	7750	111	Apr-July	4628	6956
YAAK RIVER Troy (near)	680	119	Apr-Sept	408	573
110y (near)	660	120	Apr-July	390	549
KOOTENAI RIVER	000	120	Tipl July	370	J <del>4</del> 7
Leonia (at)	10250	111	Apr-Sept	6256	9198
	9080	112	Apr-July	5409	8072
	7250	112	Apr-June	4494	6463
RACETRACK CREEK					
Anaconda (near)	39.0	114	Apr-Sept	37.7	34.1
DI TATA OPERA	31.7	115	Apr-July	30.6	27.6
FLINT CREEK	0.0	110	A	70 /	(0 (
Boulder Creek (below)(3)	82.0 67.0	118 122	Apr-Sept Apr-July	78.4 61.3	69.6 55.1
MIDDLE FORK ROCK CREEK	07.0	122	Apr-Jury	01.5	22.1
Philipsburg (near)	97.5	133	Apr-Sept	81.5	73.4
	89.0	134	Apr-July	73.3	66.2
NEVADA CREEK			1 3		
Finn (near)	25.5	123	Apr-Sept		20.7
	24.2	125	Apr-July		19.3
BLACKFOOT RIVER					
Bonner (near)	1230	122	Apr-Sept	977	1008
	1130	124	Apr-July	884	912
CLARK FORK RIVER	980	124	Apr-June	768	788
Milltown (above)(4)	930	123	Apr-Sept	789	755
militiown (above) (4)	830	126	Apr-July	705	659
	710	126	Apr-June	575	562
CLARK FORK RIVER			•		
Missoula (above)	2160	123	Apr-Sept	1786	1763
	1960	125	Apr-July	1590	1572
	1690	125	Apr-June	1343	1350

<sup>(3)</sup> Sum Flint Creek at Maxville and Boulder Creek at Maxville.

<sup>(4)</sup> Difference in observed flow Clark Fork above Missoula and Blackfoot near Bonner.



STREAMFLOW FORECASTS		THIS YEA	PAST RECORD		
	FORE	ECAST	FORECAST	THOUSAND A	ACRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average
WEST FORK BITTERROOT RIVER					
Conner (near)(5)	235	138	Apr-Sept	197	170
00mer (maar) (3)	220	139	Apr-July	183	158
EAST FORK BITTERROOT RIVER	220	200		103	130
Conner (near)	223	131	Apr-Sept	182	170
oomer (near)	204	132	Apr-July	165	154
BITTERROOT RIVER	204	132	mpr oury	103	154
Darby (near)	740	133	Apr-Sept	629	558
Daiby (Hear)	690	133	Apr-July	582	517
	600	132	Apr-June	493	453
CUALUATIO CDUEN	000	132	Apr-June	493	433
SKALKAHO CREEK	60.0	111	A C	F.F. 0	F F O
Hamilton (near)	62.0	111	Apr-Sept	55.9	55.8
TARREST TORY CREEK	55.0	113	Apr-July	48.2	48.9
BURNT FORK CREEK					
Stevensville (near)(10)	41.5	122	Apr-Sept	33.8	34.2
	36.3	122	Apr-July	29.4	29.6
BITTERROOT RIVER					
Missoula (at)(6)	1750	119	Apr-Sept	1536	1466
	1680	123	Apr-July	1424	1360
	1430	122	Apr-June	1194	1175
CLARK FORK RIVER					
Missoula (below)	3910	122	Apr-Sept	3323	3229
	3640	124	Apr-July	3014	2932
	3120	124	Apr-June	2537	2525
ST. REGIS RIVER					
St. Regis (near)	442	133	Apr-Sept		332
	420	133	Apr-July		316
CLARK FORK RIVER			•		
St. Regis (at)	5430	123	Apr-Sept	4452	4398
	5000	125	Apr-July	4048	3993
	4350	126	Apr-June	3402	3451
NORTH FORK FLATHEAD RIVER			1		
Columbia Falls (near)	2350	117	Apr-Sept		2023
1 11111	2200	119	Apr-July		1846
	1880	120	Apr-June		1562
MIDDLE FORK FLATHEAD RIVER	2000		-F = 0 0110		
West Glacier (near)	2340	121	Apr-Sept	1878	1931
	2200	122	Apr-July	1754	1791
	1860	122	Apr-June	1555	1521
SOUTH FORK FLATHEAD RIVER	1000	1 4 4	apr June	1000	1521
Columbia Falls (near)(7)	3030	128	Apr-Sept	2245	2358
Columbia rails (near)(/)	2900	130	Apr-July	2128	2235
	2550	130	Apr-June	1936	1967
	2330	130	Apr = June	1330	130/

<sup>(5)</sup> Adjusted for storage in Painted Rocks Reservoir.

<sup>(6)</sup> Difference in observed flow Clark Fork above and below Missoula.

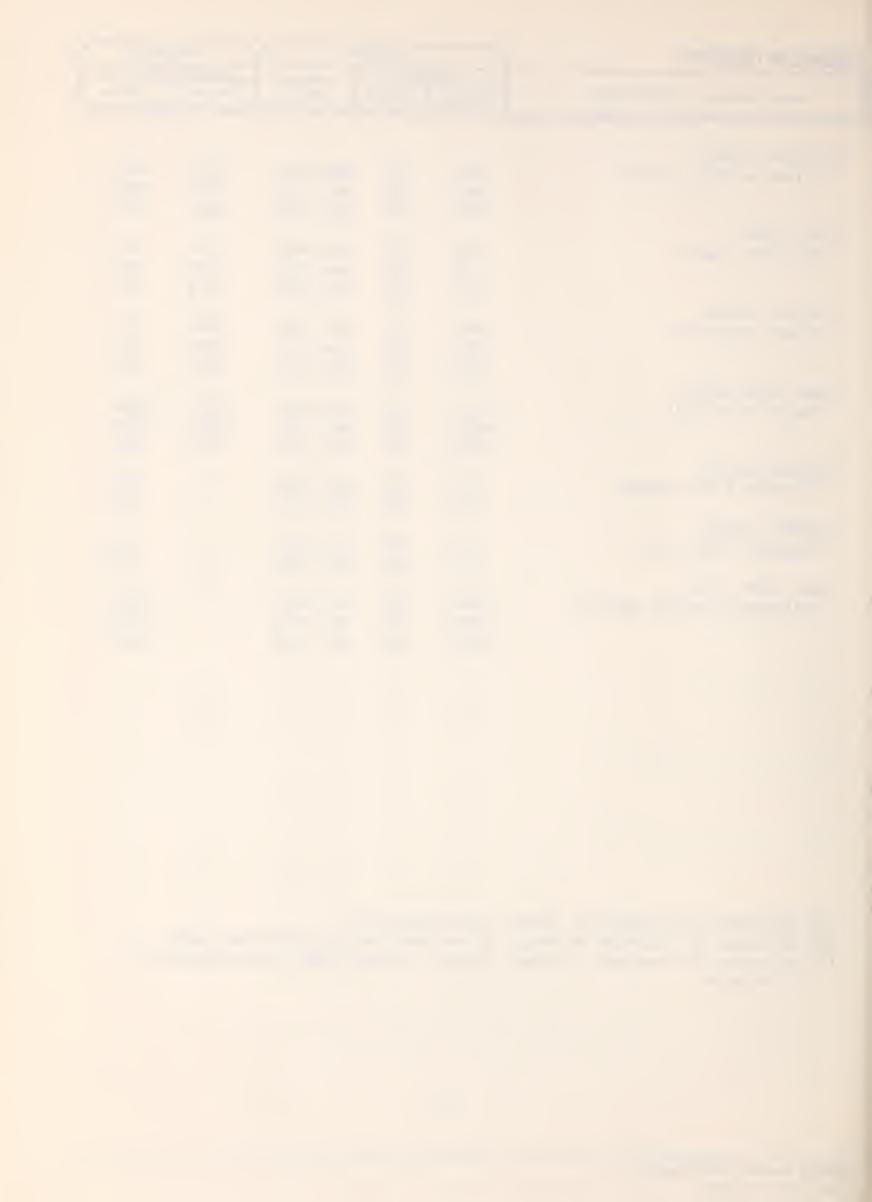
<sup>(7)</sup> Adjusted for storage in Hungry Horse Reservoir.

<sup>(10)</sup> Adjusted for diversion into Sunset Highline Canal.



REAMFLOW FORECASTS		THIS YEA	PAST RECORD		
	FORE	CAST	FORECAST	THOUSAND	ACRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average
FLATHEAD RIVER					
Columbia Falls (at)(7)	7900	122	Apr-Sept	5791	6467
	7450	124	Apr-July	5464	6003
	6410	124	Apr-June	4871	5155
SWAN RIVER					
Big Fork (near)	830	120	Apr-Sept	771	688
	740	122	Apr-July	691	607
	605	122	Apr-June	576	496
FLATHEAD RIVER					
Polson (near)(8)	9480	123	Apr-Sept	6828	7701
1018011 (11041) (0)	8950	125	Apr-July	6454	7157
	7650	125	Apr-June	5674	6123
CLARK FORK RIVER					
Plains (near)(8)	15610	125	Apr-Sept	11901	12482
	14300	125	Apr-July	10977	11448
	12300	125	Apr-June	9509	9802
THOMPSON RIVER			•		
Thompson Falls (near)	<b>33</b> 8	120	Apr-Sept		283
	310	122	Apr-July		253
PROSPECT CREEK					
Thompson Falls (at)	195	128	Apr-Sept		152
• • • • • • • • • • • • • • • • • • • •	185	129	Apr-July		143
CLARK FORK RIVER			,		
Whitehorse Rapids (at)(9)	17400	125	Apr-Sept		13987
1	16000	125	Apr-July		12787
	13700	125	Apr-June		10953

<sup>(7)</sup> Adjusted for storage in Hungry Horse Reservoir.(8) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.(9) Adjusted for storage in Hungry Horse, Flathead Lake and Noxon Rapids Reservoirs.



STREAMFLOW FORECASTS		THIS YEAR		PAST F	RECORD
	FORE	CAST	FORECAST	THOUSAND ACRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average

	MISSOURI RIVER	BASIN			
BEAVERHEAD RIVER					
Grant (near)(11)(12)	215	203	Apr-Sept	198	106
RUBY RIVER	200	222	Apr-July	173	90
Alder (near)	127	159	Apr-Sept	131	80.0
BIG HOLE RIVER	110	164	Apr-July	113	67.0
Melrose (near)	1000	145	Apr-Sept	815	690
D-D-GV GD-T-V	950	148	Apr-July	75 <b>4</b>	642
BIRCH CREEK Glen (near)	18.9	144	Apr-Sept		13.1
oren (near)	16.0	146	Apr-July		11.0
BOULDER RIVER	110	7.5.7		100	70.0
Boulder (near)	119 114	151 151	Apr-Sept Apr-Ju <b>1</b> y	100 96.8	78.9 75.5
JEFFERSON RIVER		101	11 <b>P</b> 1 0 0 2 y	, , , ,	, 3 , 3
Sappington (at)	1510	159	Apr-Sept		9 <b>4</b> 8
WILLOW CREEK	1380	161	Apr-July		857
Harrison (near)	24.2	156	Apr-Sept		15.5
MADISON RIVER	22.5	158	Apr-July		14.2
West Yellowstone (near)	276	130	Apr-Sept		212
· · · · · · · · · · · · · · · · · · ·	212	132	Apr-July		160
MADISON RIVER Grayling (near)(13)	635	147	Apr-Sept	502	430
Glayling (hear) (13)	500	148	Apr-July	410	337
MADISON RIVER					<b>-0</b>
McAllister (near)(14)	1110 900	151 154	Apr-Sept Apr-July	1063 844	7 <b>34</b> 587
GALLATIN RIVER	700	137	Tipl Odly	0 7 7	307
Gateway (near)	690	150	Apr-Sept	664	461
	600	152	Apr-July	572	393

<sup>(11)</sup> Adjusted for storage in Lima Reservoir.

<sup>(12)</sup> Adjusted for storage in Clark Canyon Reservoir.

<sup>(13)</sup> Adjusted for storage in Hebgen Lake.(14) Adjusted for storage in Hebgen and Ennis Lakes.



STREAMFLOW FORECASTS		THIS YEAR	R	PAST I	RECORD
	FOR	ECAST	FORECAST	THOUSAND A	CRE FEET
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average
INVATITED OPENIA					
HYALITE CREEK	F.C. F	1 - 1	۸ ۵ .		07 /
Bozeman (near)(15)	56.5	151	Apr-Sept		37.4
CALLATIN DIVED	49.5	152	Apr-July		32.5
GALLATIN RIVER	750	150	Ann Cont		4.73
Logan (at)	750 650	158 162	Apr-Sept		473
MISSOURI RIVER	650	102	Apr-July		401
Toston (at)(16)	3400	161	Apr-Sept	3114	2105
108(011 (at)(10)	3000	163	Apr-July	2748	1836
SHEEP CREEK	3000	103	Apr-Jury	2/40	1030
White Sulphur Springs (near)	28.4	154	Apr-Sept	30.5	18.4
white bulphul bplings (heal)	25.0	156	Apr-July	27.3	16.0
SUN RIVER	23.0	150	npi-sary	27.5	10.0
Gibson Dam (at)(17)	810	134	Apr-Sept	555	604
0155011 5am (ac)(17)	750	135	Apr-July	513	555
BELT CREEK	, 30	100	11P1 001)	313	<i>333</i>
Monarch (near)	194	178	Apr-Sept	222	109
(	180	180	Apr-July	210	100
MISSOURI RIVER			<b>P</b> = 3 = 3		
Fort Benton (at)(18)	5290	159	Apr-Sept		3321 ·
	4700	164	Apr-July		2834
TWO MEDICINE CREEK			1 ,		
Browning (near)(19)	334	130	Apr-Sept		256
	320	131	Apr-July		245
BADGER CREEK					
Browning (near)	170	128	Apr-Sept		133
	150	129	Apr-July		116
CUT BANK CREEK					
Cut Bank (at)	161	134	Apr-Sept		120
	150	135	Apr-July		111
MARIAS RIVER					
Shelby (near)(20)	790	131	Apr-Sept	646	604
	760	131	Apr-July	601	581

<sup>(15)</sup> Adjusted for storage in Middle Creek Reservoir.

<sup>(16)</sup> Adjusted for storage in Hebgen and Ennis Lakes and Clark Canyon Reservoir.

<sup>(17)</sup> Adjusted for storage in Gibson Reservoir and diversions.

<sup>(18)</sup> Adjusted for storage in Canyon Ferry Reservoir.

<sup>(19)</sup> Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Canal.

<sup>(20)</sup> Adjusted for storage in Two Medicine, Four Horns, Lake Frances and Swift Reservoirs.



STREAMFLOW FORECASTS	THIS YEAR			PAST RECORD		
	FOR	FORECAST		THOUSAND	ACRE FEET	
BASIN, STREAM and/or FORECAST POINT	BASIN, STREAM and/or FORECAST POINT  Thousand Acre Feet Av		PERIOD	Last Year	Average	
MISSOURI RIVER						
Virgelle (at)(21)	6250	155	Apr-Sept		4036	
	5550	158	Apr-July		3511	
SOUTH FORK JUDITH RIVER						
Utica (near)	18.2	146	Apr-Sept	18.9	12.5	
	17.2	147	Apr-July	17.8	11.7	
MISSOURI RIVER	60.00					
Landusky (near)(21)	6800	152	Apr-Sept		4484	
	6000	154	Apr-July		3889	
NORTH FORK MUSSELSHELL RIVER						
Delpine (near)	9.4	170	Apr-Sept	9.0	5.5	
	8.2	174	Apr-July	8.3	4.7	
SOUTH FORK MUSSELSHELL RIVER	<b></b>					
Martinsdale (above)	67.0	145	Apr-Sept	76.7	46.2	
	65,0	147	Apr-July	73.7	44.0	
MISSOURI RIVER	6600	150				
Fort Peck Dam (below)(22)	6600	153	Apr-Sept		4312	
MILE DIVID	5900	154	Apr-July		3824	
MILK RIVER	222				0.60	
Eastern Crossing (at)	290	111	Apr-Sept		262	
V-GGOVD- D-V-D						
MISSOURI RIVER	7000	150	4 0		4600	
Wolf Point (near)(22)	7000	150	Apr-Sept		4683	
MIGGOURI RIVIER	6300	151	Apr-July		4168	
MISSOURI RIVER	17000	155		10000	1.0000	
Williston, N.D. (near)(29)	17000	155	Apr-Sept	10998	10998	
	15200	155	Apr-July		9823	
0.4.07	ZAMOHETAAT	TUED DAG	TNI			
SASE	KATCHEWAN R	IVER BAS	STN			
CH MARY RIVER						
ST. MARY RIVER	500	1.00	A		/ 00	
Babb (near)(30)	588	120	Apr-Sept		492	
	515	121	Apr-July		427	

<sup>(21)</sup> Adjusted for storage in Canyon Ferry and Tiber Reservoirs.

<sup>(22)</sup> Adjusted for storage in Canyon Ferry, Tiber and Fort Peck Reservoirs.

<sup>(29)</sup> Adjusted for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Bill, Boysen and Yellowtail Reservoirs. Sum Yellowstone River near Sidney and Missouri River near Culbertson.

<sup>(30)</sup> Adjusted for storage in Lake Sherburne.



STREAMFLOW FORECASTS		THIS YEAR	PAST RECORD		
	FORECA		FORECAST	THOUSAND ACRE FEET	
BASIN, STREAM and/or FORECAST POINT	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average

	YELLOWSTONE RIVER	BASIN			
YELLOWSTONE RIVER					
Corwin Springs (at)	2700 2300	144 146	Apr-Sept Apr-July	2172 1818	188 <b>0</b> 1575
YELLOWSTONE RIVER			•		
Livingston (near)	3230 2730	152 154	A <b>pr-</b> Sept Apr-July		21 <b>2</b> 2 1769
BOULDER RIVER					
Big Timber (at)	510 480	147 147	Apr-Sept Apr-July		347 327
STILLWATER RIVER					
Absarokee (near)(25)	805 700	144 148	Apr-Sept Apr-July		558 474
CLARKS FORK RIVER	840	144	Ana Cant		582
Belfry (near)	750	144	Apr-Sept Apr-July		530
ROCK CREEK	, 50				300
Red Lodge (near)	165	156	Apr-Sept	124	106
WELL OLICHONE DIVIED	130	158	Apr-Ju1y	96.6	82.1
YELLOWSTONE RIVER Billings (at)	6050	153	Apr-Sept	5031	3944
311111165 (41)	5240	154	Apr-July	4342	3400
BIG HORN RIVER					
St. Xavier (near)(26)	2700	157	Apr-Sept	2105	1719
LITTLE BIG HORN RIVER	2550	157	Apr-July	2044	1625
Lodgegrass (near) (28)	167	136	Apr-Sept		123
	150	138	Apr-July		109
YELLOWSTONE RIVER			_		-00
Miles City (at)(27)	9100 8200	156 158	Apr-Sept		5850 5177
YELLOWSTONE RIVER	0200	130	Apr-July		21//
Sidney (near)(27)	9300	153	Apr-Sept		6069
	8350	153	Apr-July		5454

<sup>(25)</sup> Adjusted for storage in Mystic Lake.

<sup>(26)</sup> Adjusted for storage in Buffalo Bill, Boysen, Bull Lake and Yellowtail Reservoirs.

<sup>(27)</sup> Adjusted for storage in Buffalo Bill, Boysen and Yellowtail Reservoirs.

<sup>(28)</sup> Sum Little Big Horn below Pass Creek and Lodgegrass Creek near Wyola.



SNOW			THIS YEAR	PAST RECORD		
DRAINAGE BASIN and/or SNOW COURSE		Date	Snow Depth	Water Content	Water Content (inches)	
NAME	Elevation	of Survey	(Inches)	(Inches)	Last Year	Average

## COLUMBIA RIVER BASIN

KOOTENAI RIVER						
Bald Eagle Peak	5700	4/02	184	79.2	54.7	-
Banfield Mountain	5600	3/30	90	33.1	23.3	_
Banfield Mountain Pillow	5600	3/30	SP	28.1	19.3	-
Baree Creek	5500	4/01	140	54.7	42.6	49.6
Baree Midway	4600	4/01	103	418	35.5	38.8
Baree Trail	3800	4/01	41	16.2	13.2	7.8
Bear Mountain	5400	4/01	185	76.0	54.4	-
Bristow Creek	3900	3/30	46	17.1	13.7	_
Brush Creek	5000	3/30	47	13.2	13.0	13.1
Brush Creek Timber	5000	3/30	42	11.7	11.5	11.7
Cedar Grove	4100	4/02	49	18.2	13.5	-
Davis Creek	5400	3/31	95	36.7	21.5	-
Fernie	3500	3/31	. 32	10.6	7.6	8.8
Field	4200	3/31	30	6.8	3.1	5.8
Garver Creek	4250	3/31	48	16.7	10.8	-
Garver Creek Pillow	4250	3/31	SP	14.2	9.0	-
Glacier	4100	3/31	94	32 <b>.3</b>	22.4	28.7
Graves Creek	4300	3/29	68	25.2	17.3	19.5
Gray Creek	5100	3/29	77	23.7	11.4	19.2
Halverson Creek	4850	4/01	135	57.3	41.6	-
Hawkins Lake	6450	3/31	51	15.0	23.4	-
Hawkins Lake Pillow	6450	3/31	SP	41.1	21.4	-
Keeler Creek	3300	4/01	47	20.3	11.4	-
Kicking Horse	5400	3/31	59	15.9	9.4	15.2
Kimberley	3800	3/28	32	10.5	4.8	7.5
Lost Soul	4800	3/30	57	21.2	16.5	-
Marble Canyon	5000	3/31	61	20.5	6.6	13.2
Morrissey Ridge	6100	4/01	96	35.1	19.9	29.4
New Fernie	4100	3/31	62	20.5	13.1	15.8
Poorman Creek	5100	4/02	111	45.0	33.3	-
Poorman Creek Pillow	5100	4/02	SP	42.1	19.2	-
Red Mountain	6000	4/01	73	25.9	16.1	20.3
Sinclair Pass	4500	3/31	28	7.2	3.2	5.2
Stahl Peak	6050	3/29	121	48.4	35.1	-
Sullivan Mine	5100	3/30	56	17.6	10.0	14.6
Upper Elk River	4400	3/29	33	9.2	5.0	7.4
Weasel Divide	5450	3/29	118	45.3	30.0	35.3

SP - Snow pillow observation - water content only.



DRAINAGE BASIN and/or SNOW COURSE		Date	Snow Depth	Water Content	Water Content (inches)	
NAME	Elevation	of Survey	(Inches)	(Inches)	Last Year	Average
FLATHEAD RIVER						
Bassoo Peak	5150	4/01	42	14.8	12.8	12.2
Beaver Lake	5900	4/04	87	34.7	_	24.0
Big Creek	6750	3/30	135	57.2	51.2	46.7
Camp Misery	6400	4/05	143	59.6	51.6	46.8
Desert Mountain	5600	4/01	53	20.0	16.7	16.3
Fatty Creek	5500	3/30	80	29.8	29.8	22.8
Griffin Creek Divide	5150	3/31	47	15.8	13.2	12.6
Gunsight Lake	6300	4/04	117	45.9	41.5	41.0
Hell Roaring Divide	5770	4/02	95	37.4	31.4	33.1
Holbrook	4530	3/31	41	13.5	11.4	10.4
Kishenehn	3890	4/01	34	11.2	7.1	9.6
Logan Creek	4300	3/30	32	9.5	8.4	8.6
Marias Pass	5250	3/26	82	30.2	20.2	18.8
Mineral Creek	4000	3/29	76	26.5	19.2	21.4
Noisy Creek	3600	3/31	. 14	4.4	7.6	-
North Fork Jocko	6330	3/31	147	60.0	49.6	47.2
Spotted Bear Mountain	7000	4/04	56	20.3	17.4	15.1
Trinkus Lake	6100	4/04	127	49.5	49.2	44.2
Twin Creeks	3580	4/04	42	17.9	13.5	11.4
Upper Holland Lake	6200	4/04	124	48.3	33.2	36.1
CLARK FORK RIVER						
Black Pine	7100	4/01	50	16.5	13.4	14.1
Black Pine Pillow	7100	4/01	SP	16.2	13.3	14.1
Combination	5600	4/01	16	5.4	6.2	-
Copper Bottom	5200	4/01	47	17.4	-	-
Copper Creek	5700	4/01	60	25.4	14.6	15.1
Copper Lake Creek	6100	4/01	91	37.1	-	-
Cotter Mine	6250	4/01	87	37.7	20.6	17.2
Coyote Hill	4200	3/30	38	13.2	14.2	10.4
El Dorado Mine	7800	3/30	73	26.4	25.0	21.2
Fred Burr Pass	8000	3/29	84	29.6	24.8	26.6
Gold Creek Lake	7200	3/30	56	19.4	17.6	15.9
Heart Lake Trail	4800	3/30	79	33.2	20.8	23.0
Hoodoo Basin	6000	3/30	157	67.8	47.8	54.5
Hoodoo Basin Pillow	6000	4/01	SP	68.3	48.6	-
Hoodoo Creek	5900	3/30	157	64.2	44.1	50.6
Intergaard	6450	4/01	31	9.2	7.9	8.5
Lookout	5250	4/01	131	49.8	34.6	38.4

THIS YEAR

PAST RECORD

SNOW

SP - Snow pillow observation - water content only.



DRAINAGE BASIN and/or SNOW COURSE	Date	Snow Depth	Water Content	Water Content (inches)			
NAME	Elevation	of Survey	(Inches)	(Inches)	Last Year	Average	
CLARK FORK RIVER (Continued)							
Lubrecht Flume	4800	3/31	22	6.0	-	-	
Lubrecht Flume Pillow	4800	3/31	SP	5.6	-	-	
Lubrecht Forest No. 3	5450	3/31	26	7.4	7.6	7.4	
Lubrecht Forest No. 4	4650	3/31	8	2.2	3.5	2.9	
Lubrecht Forest No. 6	4040	3/29	4	1.6	3.0	3.0	
Lubrecht Hydroplot	4200	3/31	14	4.4	-	-	
North Fork Elk Creek	6250	3/30	43	13.6	-	-	
North Fork Elk Creek Pillow	6250	3/30	SP	13.3	-	-	
Peterson Meadows	7200	3/30	40	11.6	-	-	
Peterson Meadows Pillow	7200	3/30	SP	13.2	-	-	
Red Lion	7100	3/29	58	18.4	16.5	16.6	
Skalkaho Summit	7260	4/01	89	33.2	27.2	26.4	
Slide Rock Mountain	7100	3/31	59	20.0	15.0	15.4	
Southern Cross	6500	4/01	23	7.7	6.8	7.4	
Storm Lake	7780	3/31	. 55	17.4	14.0	14.6	
Stuart Mill	6500	4/01	23	7.6	14.0	7.1	
Stuart Mountain	7400	4/01	102	42.6	34.0	32.2	
TV Mountain	6800	3/30	74	24.7	20.7	18.5	
BITTERROOT RIVER							
Ambrose	6480	3/29	48	15.4	11.6	13.7	
East Fork Ranger Station	5400	3/31	21	6.0	6.2	7.1	
Gibbons Pass	7100	3/24	83	31.5	24.3	23.0	
Lolo Pass	5230	3/24	96	35.9	30.4	33.8	
Lost Horse	5940	4/01	109	43.2	32.9	33.0	
Moose Creek	6200	3/30	64	23.6	17.9		
Nez Perce Camp	5680	4/02	49	18.6			
Nez Perce Pass	6570	4/02	57	21.2	18.8		
Saddle Mountain	7940	3/31	94	34.4	26.4	25.8	
Saddle Mountain Pillow	7940	3/31	SP	39.2	27.6	-	
Savage Pass	6600	3/24	91	32.6	23.3		
Twelvemile Creek	5600	4/01	76	30.6	24.1	_	
Twelvemile Creek Pillow	5600	4/01	SP	27.3	19.8	_	
Twin Lakes	6510	4/01	140	53.6	40.7	45.0	
Twin Lakes Pillow	6400	4/01	SP	54.1	39.0	-	
TWEIT DOICE TITLEW	0 100	. / 01	01	J T . L	37.0		

THIS YEAR

PAST RECORD

SNOW

SP - Snow pillow observation - water content only.



## MISSOURI RIVER BASIN

BEAVERHEAD RIVER						
Bloody Dick	7600	4/01	51	16.2	12.4	1,1.1
Camp Creek	6800	3/29	49	17.0	9.6	9.0
Carter Creek	7400	4/03	28	7.3	8.9	5.8
Dad Creek Lake	8400	4/03	60	20.8	-	13.0
Elk Horn Springs	7800	4/01	42	12.6	10.0	9.8
Gold Stone	8100	4/01	65	21.9	17.2	14.8
Kilgore	6200	3/29	47	18.2	14.1	8.9
Lakeview Canyon	6930	3/31	61	20.6	11.5	11.5
Lakeview Ridge	7400	3/31	50	16.2	11.3	10.0
Lemhi Pass	7480	3/31	41	12.3	9.5	8.5
Lemhi Ridge	8100	3/31	49	15.2	9.4	-
Sawtelle Mountain	8715	3/29	123	48.6	34.8	-
Trail Creek	7090	3/31	. 40	12.0	8.6	8.4
White Pine Ridge	8850	4/03	28	6.6	-	5.2
RUBY RIVER						
Branham Lakes	8850	3/29	103	42.5	36.0	-
Clover Meadow	8600	4/03	74	27.7	21.1	16.0
Divide	7900	4/03	56	19.9	-	9.7
Middle Mill Creek	7850	3/29	65	24.5	21.0	-
Notch	8500	4/03	66	24.0	-	13.6
Smuggler Mine	6960	3/29	42	13.8	13.6	-
BIG HOLE RIVER						
Abundance Lake	8800	4/03	72	27.6	23.0	19.8
Calvert Creek	6450	4/02	45	14.7	13.6	-
Darkhorse Lake	8600	4/04	98	40.7	29.2	27.0
Foolhen	8280	4/03	65	24.4	18.5	17.8
Jahnke Lake Trail	7200	4/01	48	15.2	11.8	-
Mudd Lake	7650	4/02	72	26.9	18.4	-
Palisade Creek	8250	4/02	104	43.0	32.9	-
Slag-A-Melt Lake	8750	4/04	91	37.8	-	-
JEFFERSON RIVER						
Berry Meadow	7300	4/05	30	9.0	7.7	7.6
Copper Mountain	7700	3/31	41	12.2	12.9	11.3
Nez Perce Creek	6500	3/31	14	3.9	6.8	•
Picnic Grounds	6500	4/01	15	4.1	5.0	4.6
Pipestone Pass	7200	3/29	18	4.9	6.0	6.0
Rocker Peak	8000	4/05	59	21.3	16.0	-
Rocker Peak Pillow	8000	4/05	SP	19.2	14.6	-
Uncle Sam Gulch	6500	4/05	24	7.4	8.4	-



	(		THIS YEAR	Y	PAST RECORD		
DRAINAGE BASIN and/or SNOW COURSE		Date	Snow Depth	Water Content	Water Conte	nt (inches)	
NAME	Elevation	of Survey	(Inches)	(Inches)	Last Year	Average	
MADISON RIVER			····				
Big Springs	6500	3/29	80	30.8	23.2	20	
Black Canyon	7850	3/30	121	46.8	35.2	34	
Black Moose	8125	3/30	136	54.0	39.2	40	
Call Road	8050	4/03	53	17.9	14.7	10	
Four Mile	6900	3/29	35	10.6	10.0	8	
Hebgen Dam	6550	3/25		15.6	13,6	11	
Island Park	6315	3/29	68	25.2	19.4	15	
Jack Creek	7500	3/30	28	9.1	7.2	6	
Lake Creek	6100	4/01	36	11.9	10.6	7	
	7650	3/30	116	46.6	33.6		
Latham Springs		3/30				33	
Lion Mountain	8760	•	76	25.6	21.7	-	
Lion Mountain Pillow	8760	3/31	SP	15.5	15.6	-	
Lower Twin	7900	3/29	80	29.8	25.2	19	
Lucky Dog	6900	3/30	95	36.2	26.4	24	
Madison Plateau	7750	3/30	91	35.4	23.6	-	
Madison Plateau Pillow	7750	0,00	· SP	37.0	25.2	-	
Meridian Creek	7000	4/01	44	14.1	11.1	ç	
Norris Basin	7500	4/02	47	15.0	12.3	10	
North Meadow	7500	3/29	38	10.8	9.6	7	
Old Road	7250	3/30	102	41.0	29.8	27	
Poachers Cabin	8000	3/30	107	45.4	30.6	33	
Potomageton Park	7150	3/31	58	19.6	15.4	15	
Sentinel Creek	8300	3/31	90	33.0	25.0	23	
Soap Bogus Divide	7600	4/01	68	24.2	20.6	-	
Targhee Pass	7000	3/29	66	23.1	15.6	13	
Tepee Creek	8000	4/01	66	23.8	17.6	13	
Valley View	6500	3/29	69	26.1	16.4	15	
West Yellowstone	6700	3/25	52	17.9	12.3	10	
West Yellowstone Pillow	6700	3/28	SP	14.9	7.3	-	
Whiskey Creek	6800	3/30	81	31.1	22.0	-	
GALLATIN RIVER							
Arch Falls	7350	3/29	55	17.1	19.2	12	
Bear Basin	8150	4/01	90	31.8	26.4	20	
Bridger Bowl	7250	3/31	114	43.2	38.6	27	
Bridger Bowl Pillow	7250	3/31	SP	39,7	36.8	26	
Carrot Basin	9000	4/02	136	59.4	39.9	-	
Carrot Basin Pillow	9000	4/02	SP			-	
Devils Slide		3/29				22	
Hood Meadow	6600				16.2		
Lick Creek	6860						
Lick Creek Pillow	6860	•					
Little Park		4/01			19.3		
Maynard Creek		3/31			26.4		
•		3/31					
Maynard Creek Pillow New World		3/31					
Shower Falls Diller		3/29			36.7		
Shower Falls Pillow		3/29			32.0		
Twenty-One Mile	7150	3/25	74	27.3	17.0	17	

Average based on 1953-67 period. SP - Snow pillow observation - water content only.

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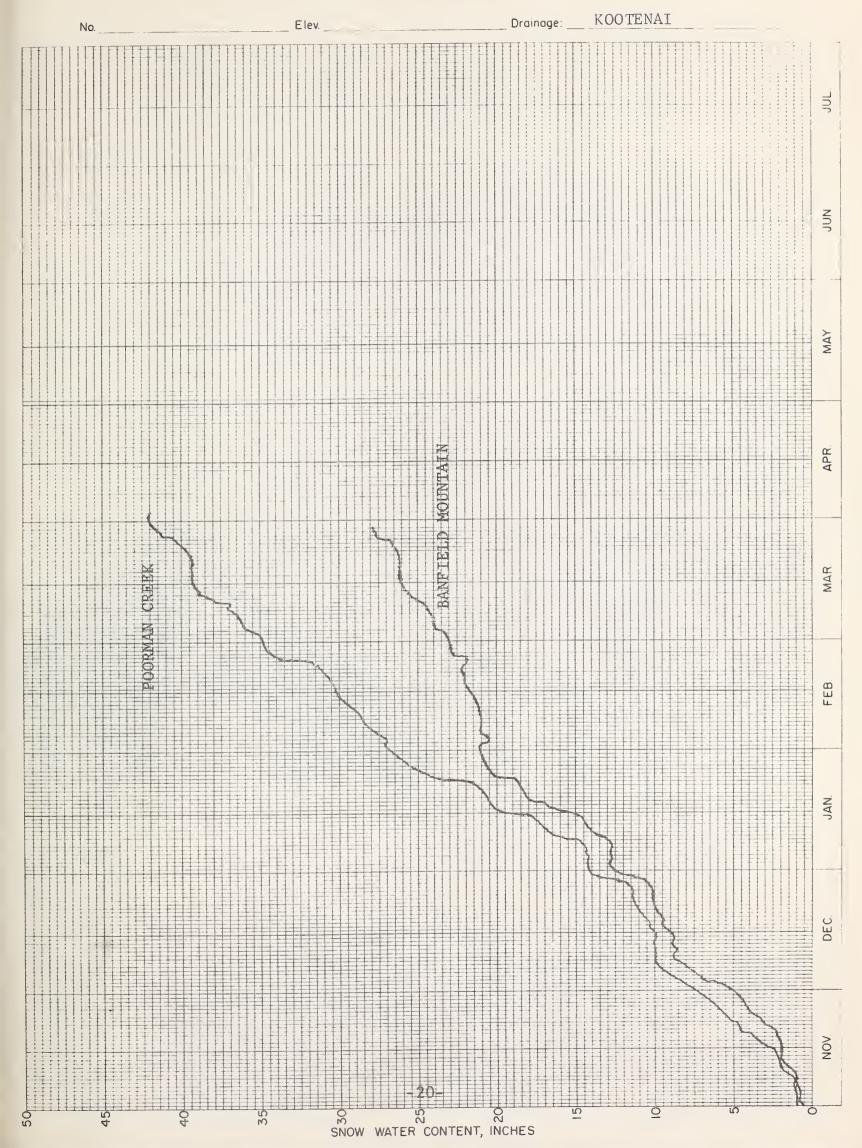
		THIS YEAR	PAST RECORD					
DRAINAGE BASIN and/or SNOW COURSE		Date	Snow Depth	Water Content	Water Conte	Water Content (inches)		
NAME	Elevation	of Survey	(Inches)	(Inches)	Last Year	Average		
MISSOURI RIVER (Main Ste	em)							
Boulder Mountain	7950	3/29	79	29.4	22.7	16.8		
Chessman Reservoir	6200	4/01	15	4.8	4.1	4.2		
Deadman Creek	6450	4/01	46	15.4	18.1	11.4		
Deadman Creek Pillow	6450	4/01	SP	13.6	15.4	-		
Elk Peak	8000	3/30	68	23.8	22.0	16.9		
Grasshopper	7000	3/30	24	7.2	7.0	5.4		
Kings Hill	7500	4/02	58	18.4	21.7	13.		
Stemple Pass	6600	3/30	43	13.0	8.6	10.		
Ten Mile Lower	6600	4/01	27	8.0	5.9	6.		
Ten Mile Middle	6800	3/31	46	14.0	9.4	10.		
Ten Mile Upper	8000	3/31	56	18.1	13.1	14.		
SUN-TETON-MARIAS RIVERS								
Badger Pass	6900	4/04	134	58.4	43.0	37.		
Blue Lake	5900	4/04	94	36.6	26.4			
Cabin Creek	5200	3/31	33	10.1	6.6	7.		
Five-Bull	5700	4/04	32	10.1	10.0	6.		
Freight Creek	6000	4/04	60	26.6	14.5	16.		
Goat Mountain	7000	3/30	50	16.1	11.1	11.		
Mount Lockhart	6400	4/06	83	31.5	24.0	_		
Mount Lockhart Pillow	6400	4/06	SP	31.9	29.8	4000		
Waldron	5600	4/06	46	17.2	12.0			
Waldron Pillow	5600	,	SP	15.8	11.5	-		
Wrong Creek	5700	4/03	67	22.8	14.1	16.		
Wrong Ridge	6800	4/02		28.7		21.		
JUDITH RIVER								
Avalanche	7100	4/02	79	23.9	36.0	440		
Big Snowy	7150	4/02	77	24.2	-	_		
Crystal Lake	6100	4/02		17.8	23.8	12.		
Rock Creek	5600	4/02	35	10.6	16.0	8.		
Spur Park	8000	4/01	84	29.0	29.1	21.		
Spur Park Pillow	8000	4/01	SP	27.6	28.2	-		
MUSSELSHELL RIVER								
Daisy Peak	7600	3/30	46	13.4	12.3	_		
Eagle Creek	7000	3/22	54	16.4	19.0	•••		
Forest Lake	6400	3/22		14.0				
Haymaker	8050	3/23	51	15.0	17.6	des		
Johnson Park	6450	3/30	33	9.7	8.0			

SP - Snow pillow observation - water content only.

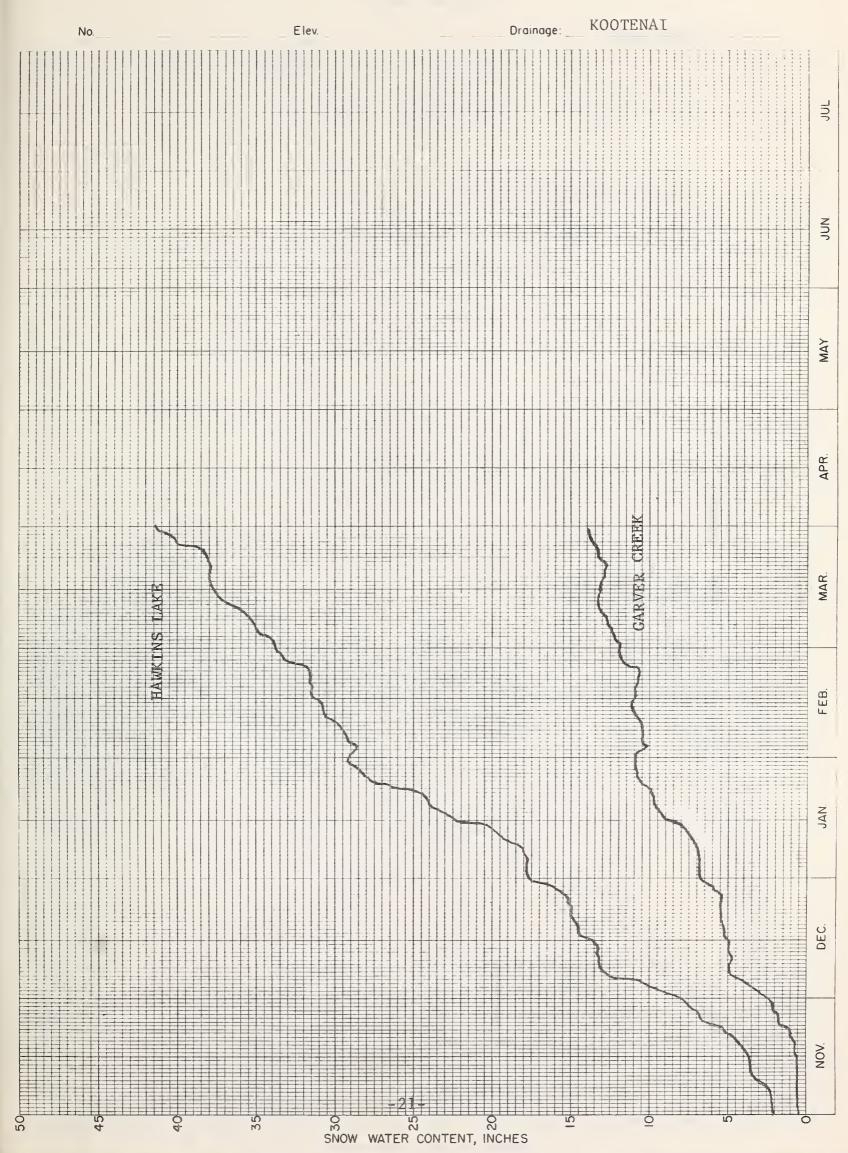


WOM			THIS YEAR	Y	PAST RECORD			
	DRAINAGE BASIN and/or SNOW COURSE	···	Date	Snow Depth	Water Content	Water Conte	ent (inches)	
	NAME	Elevation	of Survey	(Inches)	(Inches)	Last Year	Average	
	MILK RIVER							
	Bear Paw Ski Area	5200	3/31	36	11.8	12.0	-	
	King Creek Saddle	4550	4/04	27	8.2	400		
	King Springs	4150	4/04	19	6.3	••		
	Mission Mountain	5050	4/04	30	8.7	-	<b>6</b> 0	
	Rocky Boy	4700	3/31	27	7.6	6.6	4.5	
	Rocky Boy Pillow	4700	3/31	SP	9.7	6.5	an	
	ST. MARY RIVER							
	Hudson Bay Divide	5800	3/30	74	25.8	18.0	18.9	
	·							
	SASKATCHEWAN (BOW) RIVER							
	Bow River #1	5100	3/29	<b>3</b> 8	10.2	4.7	9.4	
	Chateau Lawn #8	5700	3/29	. 50	14.0	6.0	11.3	
	Mirror Lake #6	6600	3/29	46	14.5	6.0	12.7	
	Mount Eisenhower #10	5000	3/30	34	7.4	2.9	4.9	
	Upper Pipestone #2	5300	3/30	40	9.9	8.2	9.0	
	UPPER YELLOWSTONE RIVER							
	Bald Ridge	7500	3/31	54	15.9	18.2	12.5	
	Camp Senia	7890	3/29	20	7,6	11.4	6.4	
	Canyon	7750	3/31	67	21.0	16.3	16.1	
	Cooke Station	8150						
	Crevice Mountain	8400	· ·					
	East Entrance	7000					9.7	
	Fisher Creek	9100	-					
	Fisher Creek Pillow	9100						
	Grizzly Peak	8400	4/01				16.5	
	Independence	8000	4/02	79	29.8	20.0	18.2	
	Lake Camp	7850	3/31	52	15.0	8.5	9.9	
	Lupine Creek	7300	4/03	47	13.8	11.6	10.3	
	Mill Creek	7500	4/02	56	17.8	18.7	<b>350</b>	
	Monument Peak	9000	4/02	103	38.8	28.4	24,8	
	Northeast Entrance	7400	3/31	43	13.2	10.8	9,1	
	Northeast Entrance Pillow	7350	4/03	SP	13.0	11.6	₩	
	Porcupine Ranger Station	6500			9.4			
	Sacajawea	6550						
	South Fork Shields	8100						
	Sylvan Pass	7100	3/31		20.4		13.4	
	Thumb Divide	7900						
	Timberline Creek	8850	3/29		17.8			
	West Rosebud	7500	· ·	53				
	White Mill	8700	3/30	107	41.1	31.2	25.8	

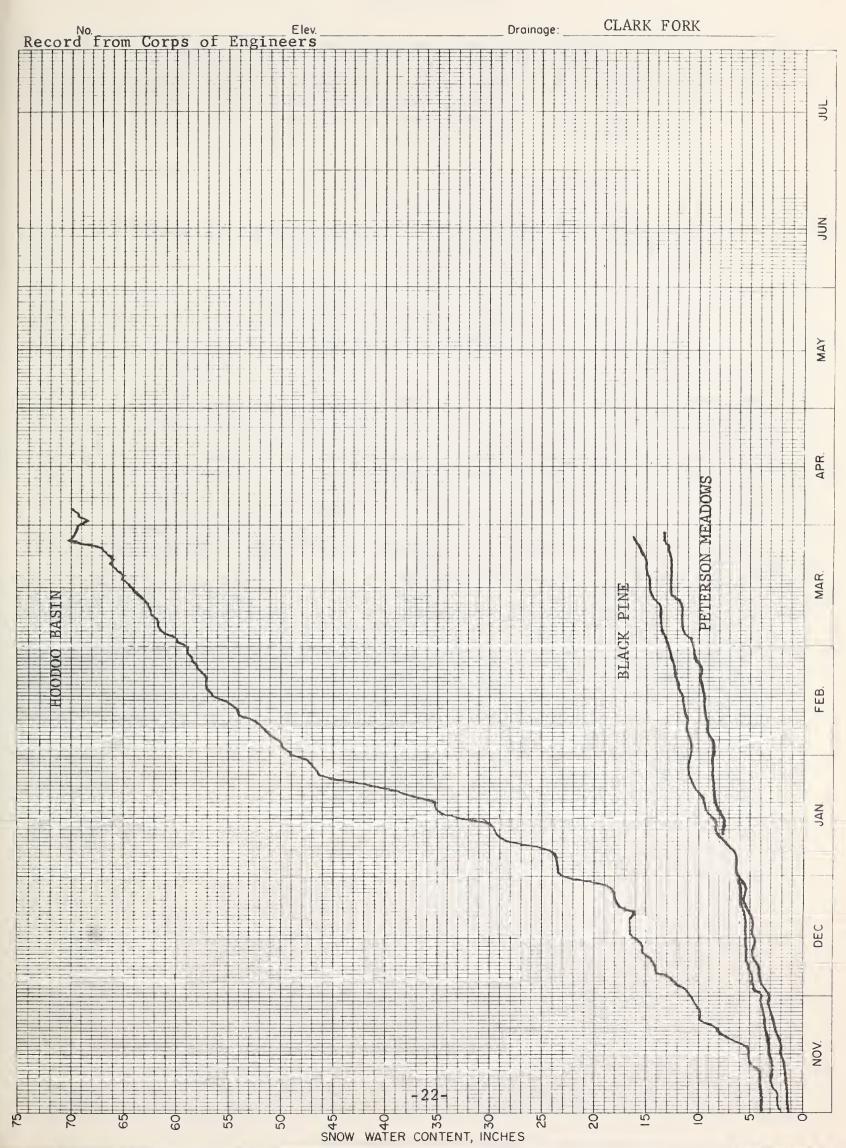




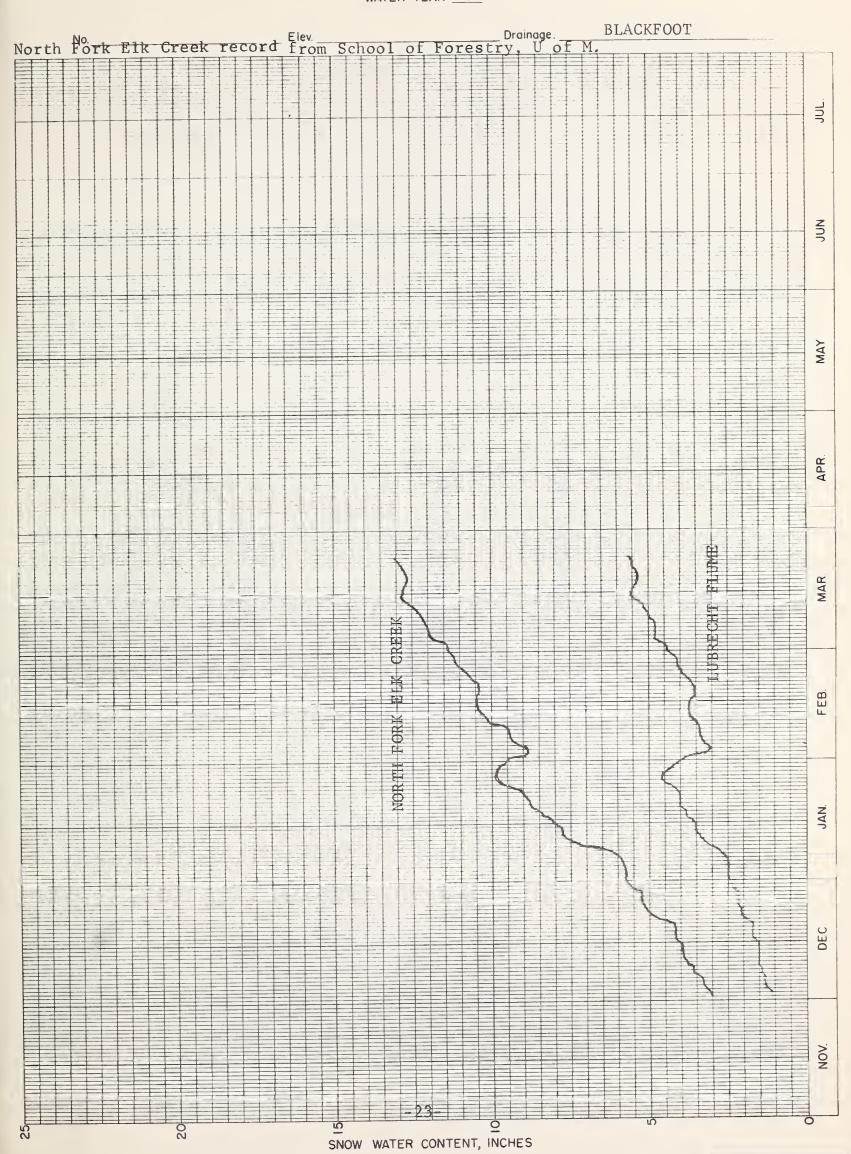




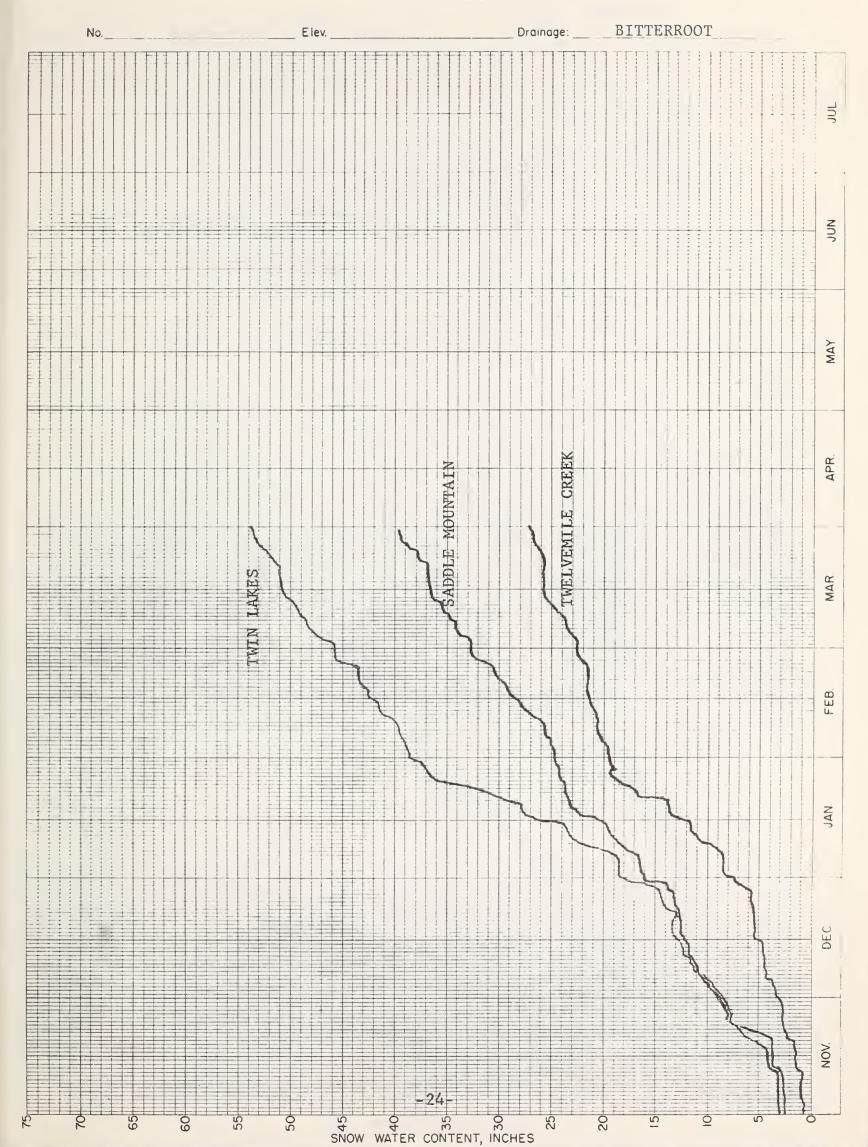




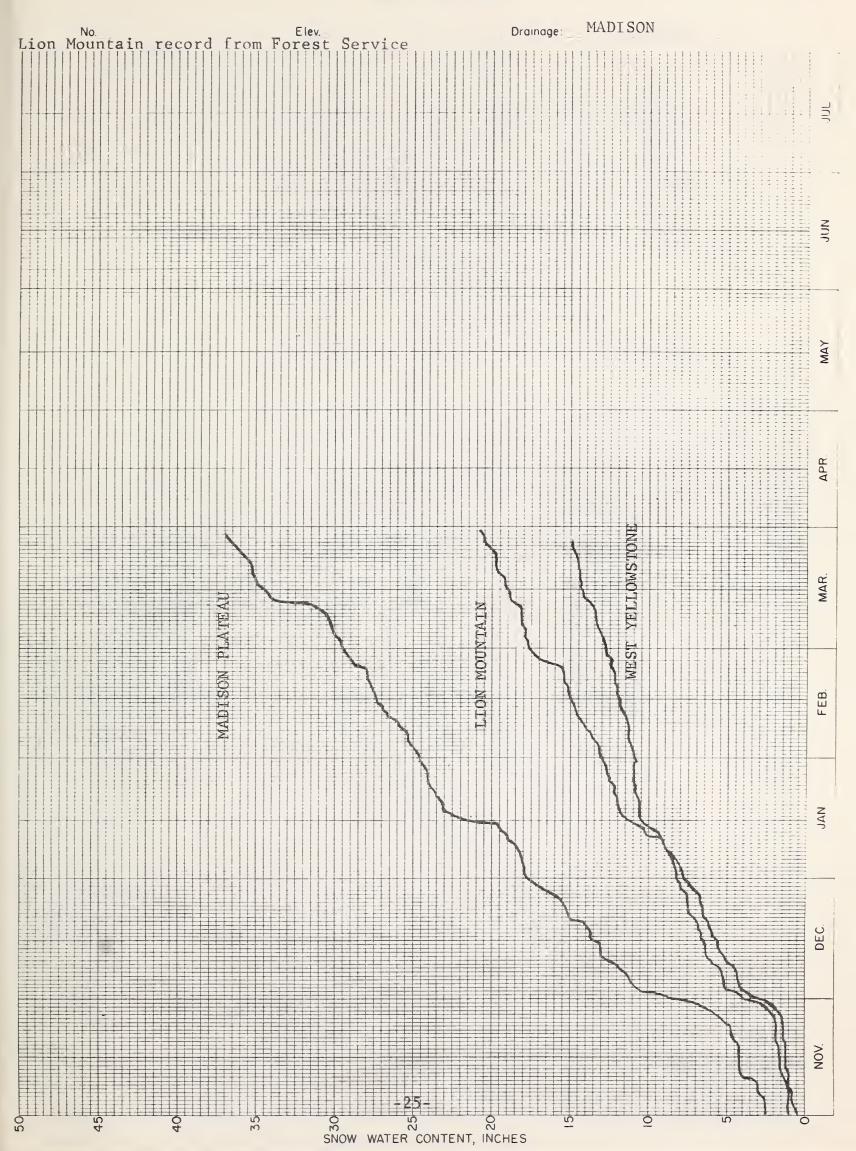




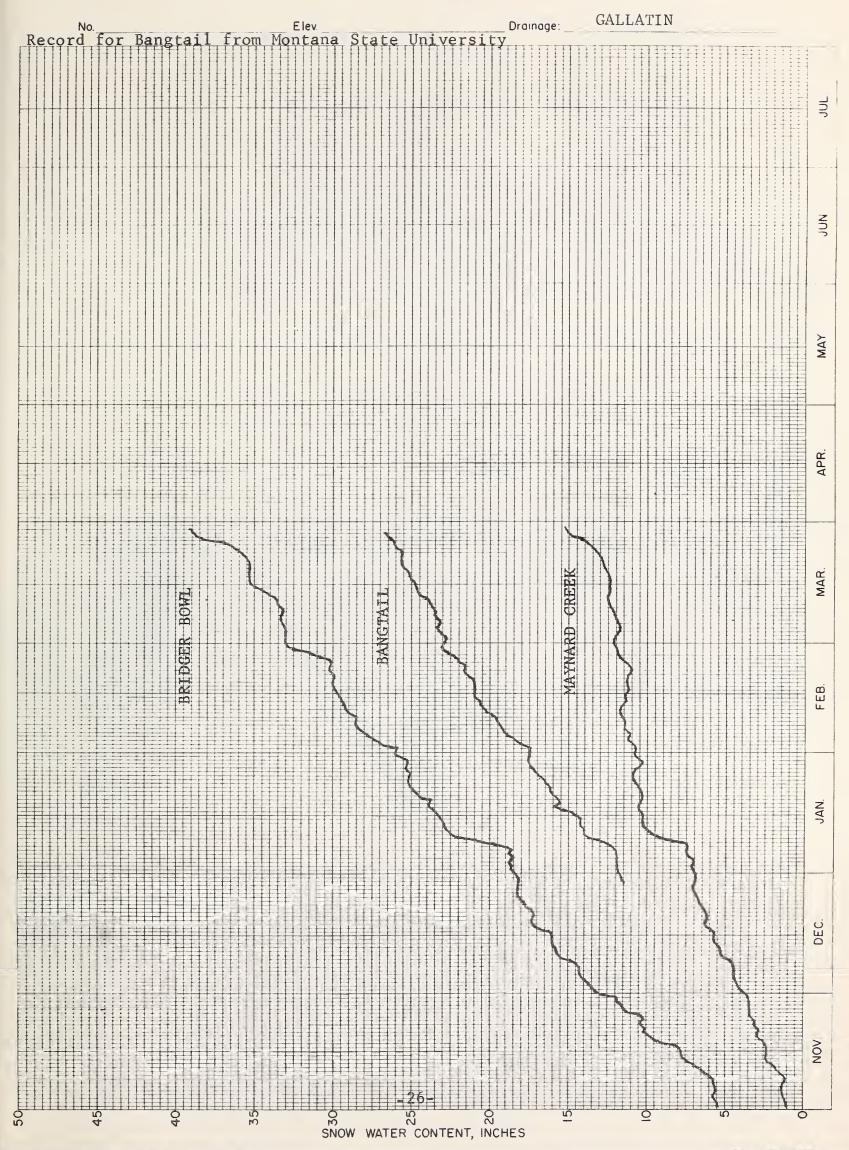




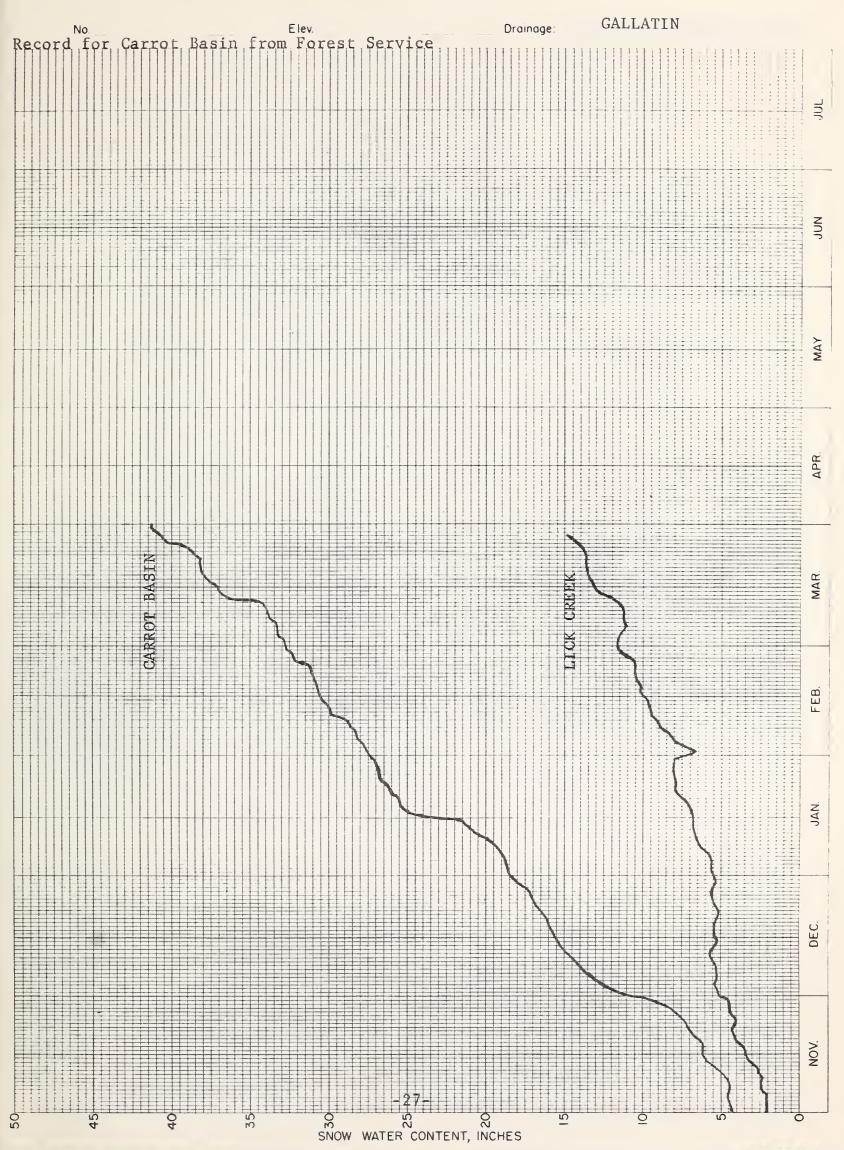








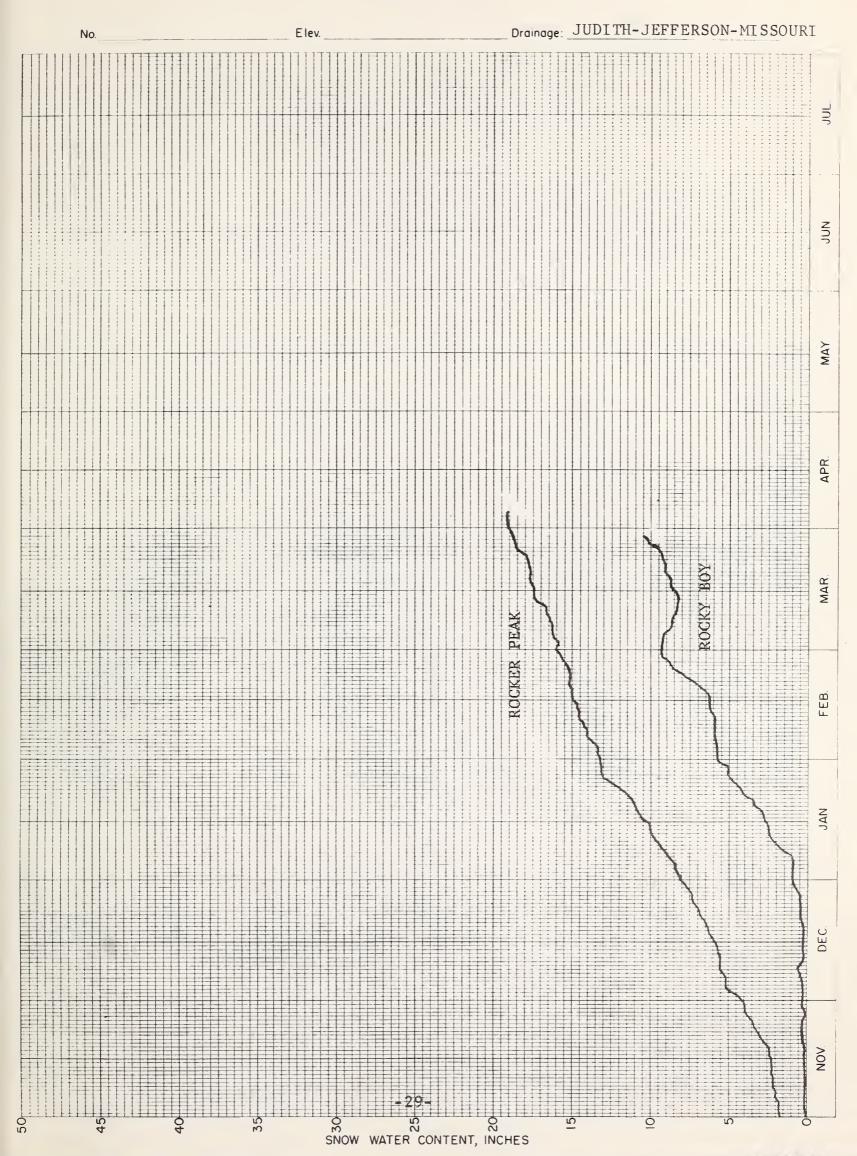






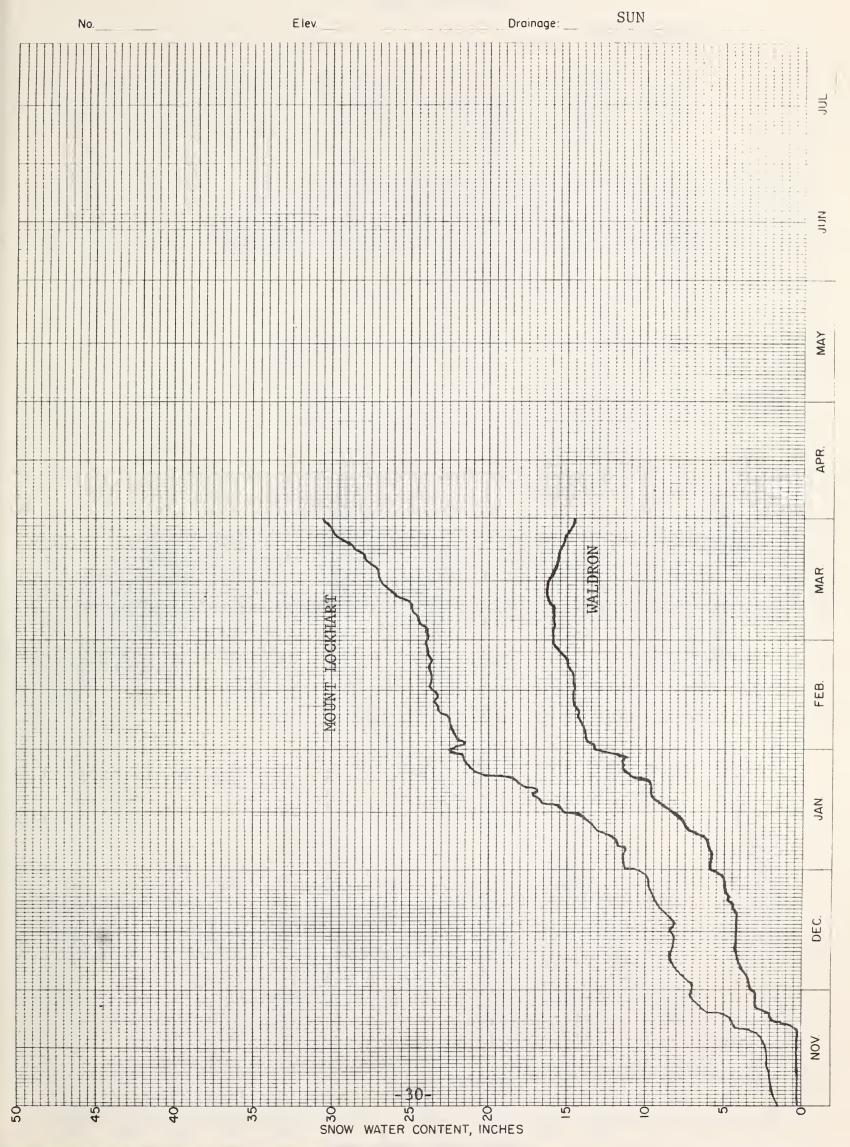
Drainage: JUDITH-JEFFERSON-MISSOURI Elev. No. MAYAPR FEB. JAN. DEC. SNOW WATER CONTENT, INCHES



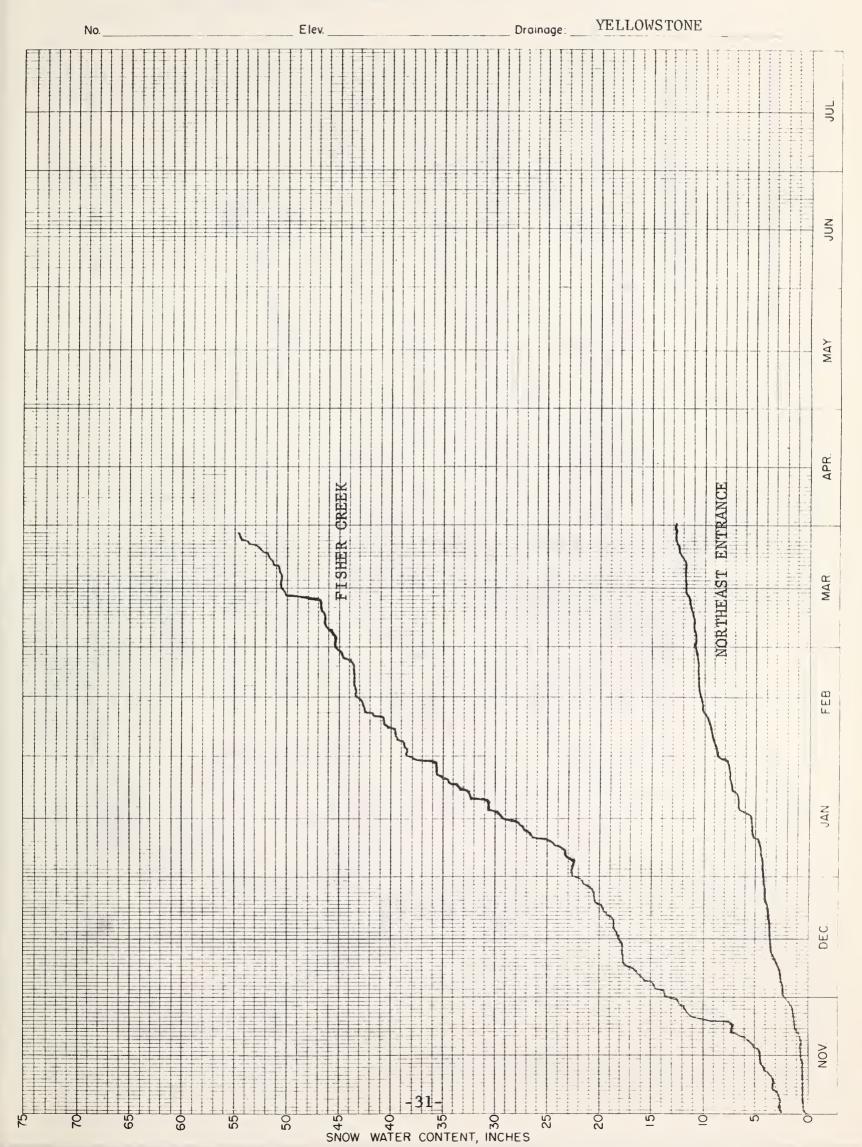




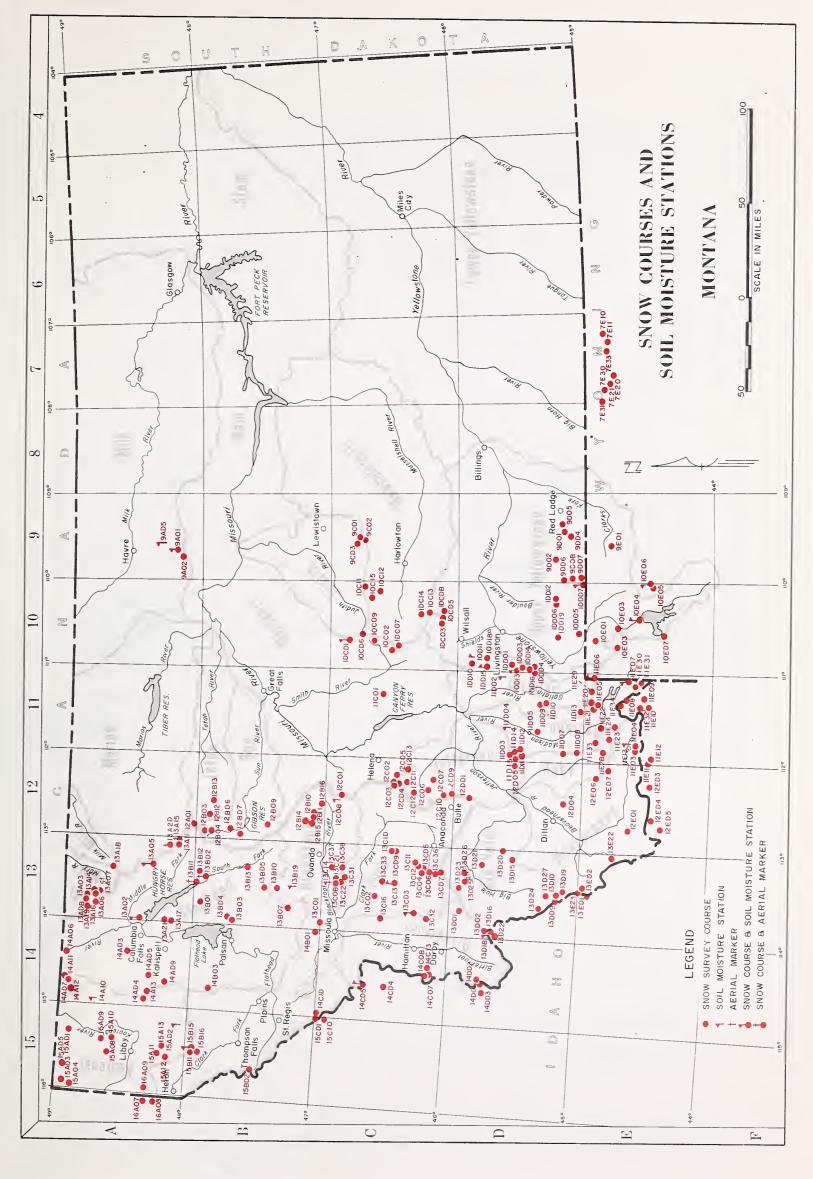
# SNOW PILLOW DATA WATER YEAR 1971











# INDEX to MONTANA SNOW COURSES and SOIL MOISTURE STATIONS

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	Drainage Basin & Snow Coarse		A CO CIT MAINTY CENTRAL MAINTY CENTR	Gavis Creek Carver Creek Carver Creek Rawkins Laka Neeler Creek Lost Sool Poorman Creek Red Manain Stall Peak	FLATHEAD RIVER Basso Peak Beaver Lake	Described to the control of the cont	Molbrook Kishenehn Logan Greek Marias Pase	Noisy Creek North Fork Jocko Spotted Bear Mountain Trinkus Lake Twin Greeks	CLARK FORK RIVER Black Pine Combination Copper Bottom	Copper Creek Copper Lake Greek Cotter Mine Coyote Hill El borado Mine	Fred Burr Pass Cold Creek Lake Heart Lake Irail Hoodoo Basin	Intergard Lubracht Flume Lubracht Forest No. 3 Lubracht Forest No. 4	Lubrecht Forest No. 6 Lubrecht Mydroplot Morth Fork Elk Greek Peterson Meadows Red Lion Skal kaho Summit Slaikaho Summit	Southern Cross Storm Lake Stuart Mill Stuart Mountain TV Mountain	BITTERROOT RIVER Ambrose Coyote Mesdows Trail East Fork R.S. Clabons Pass	Nez Perce Camp Nez Perce Pass Saddle Mountain Twelvemila Creek Dvin Lakes	ST. MARY RIVER BA Nudson Bay Divide Treberg Lake No. 3 Josephine Lower No. 9 Mount Allan No. 7 Pigean Pass No. 6 Paraskan No. 8		BEAVERHEAD RIVER Bloody Dick Carrer Greek Dad Greek Lake Cold Stone Cold Stone Lakeview Vanyon

# Agencies and Organizations Cooperating in Montana Snow Surveys

- U. S. Forest Service Region I, Missoula, Montana Montana Forests and Ranger Districts
- U. S. Geological Survey Helena, Montana Portland, Oregon
- U. S. Army Corps of Engineers Portland, Oregon Seattle, Washington Walla Walla, Washington Omaha, Nebraska
- U. S. Indian Irrigation Service St. Ignatius, Montana
- U. S. Weather Bureau Helena, Montana Portland, Oregon Kansas City, Missouri
- U. S. Bureau of Sports Fisheries and Wildlife Red Rock Lakes Refuge Monida, Montana
- U. S. Bureau of Reclamation Billings, Montana Boise, Idaho
- U. S. Bonneville Power Administration Portland, Oregon

- U. S. Soil Conservation Service Montana, Wyoming, Idaho
- Soil and Water Conservation Districts Montana Counties
- U. S. National Park Service Yellowstone National Park Glacier National Park
- Montana Power Company Butte, Montana
- Montana Water Resources Board Helena, Montana
- North Montana Branch Station Agricultural Experiment Station Havre, Montana
- Montana State University
  Agricultural Experiment Station
  Bozeman, Montana
- University of Montana School of Forestry Missoula, Montana
- Water Rights Branch, Dept. of Lands and Forests Victoria, British Columbia
- Department of Energy, Mines and Resources Calgary, Alberta

UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE P.O. BOX 98

BOZEMAN, MONTANA 59715

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